

DIAGNOSES OF CYRTANDRA SPECIES (GESNERIACEAE) SECT.  
CHAETOCALYCES

HAWAIIAN PLANT STUDIES 152

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The section *Chaetocalyces* is distinguished by the ligulate shape of its long calyx lobes. It now is known to contain 31 species and 3 varieties. They occur on Molokai, Maui, Lanai, and Hawaii, but not on the two northern others.

The types of the following species are in the Bishop Museum, Honolulu.

*Cyrtandra adine* sp. nov. Novellae villosae sunt, foliis oppositis, petiolis 25-38 mm longis villosis, laminis 7-10.2 X 3.8-6 cm ellipticis subacuminatis basi rotundata supra pilosis infra pilosis, cymis 3.5-4 cm longis 3-6-floriferis villosis, pedicellis 6-8 mm longis, calycibus 8-9 mm longis villosis lobis 7-9 mm longis 1-1.5 mm latis ligulatis. Typus: Maui I., C. N. Forbes 1,078.M.

*Cyrtandra adpressa* sp. nov. Novellae adpresse puberulae sunt, foliis oppositis inaequalibus, petiolis 6-30 mm longis puberulis, laminis 4.5-8 X 1.9-3.7 cm oblanceolatis supra hirsutulis infra nervis puberulis, cymis 2.5-3 cm longis 1-floriferis puberulis, calycibus 12-15 mm longis puberulis lobis 11-13 mm longis, corollis 16-17 mm longis puberulis tubo 12-13 mm longo, loba infera 5.5 mm longa suborbiculari. Typus: Maui I., F. R. Warshauer 2,536.

*Cyrtandra adusta* sp. nov. Ramulae pilosae sunt, foliis oppositis, petiolis 3.5-6 cm longis pilosulis, laminis 14.5-17 X 6-7 cm ellipticis acuminatis basi cuneata et decurrentibus supra hirsutulis infra nervis hirsutulis, cymis 5-6 cm longis 3-5-floriferis pilosulis, pedicellis 10-23 mm longis, gemmis fusiformibus, calycibus 19-20 mm longis adpresse pilosulis lobis 12-16 mm longis ligulatis, corollis 30 mm longis adpresse pilosulis. Typus: Maui I., F. R. Warshauer 2,889.

*Cyrtandra alikaensis* sp. nov. Novellae pilosulae sunt, foliis oppositis inaequalibus, petiolis 4-8.5 mm longis pilosulis, laminis 16-21.5 X 5.5-7.5 cm oblanceolatis supra hispidulis infra puberulis, cymis 3-5 cm longis 7-11-floriferis. Typus Maui I., Nahiku, H. St. John et al. 17,897.

*Cyrtandra badia* sp. nov. Novellae hirsutae sunt, foliis oppositis, petiolis 8-20 mm longis hirsutis, laminis 5-9.5 X 2.5-4.5 cm fusiformi-ellipticis acuminatis hirsutis, cymis 2-6 cm longis 1-floriferis hirsutis, pedicellis 20-35 mm longis, calycibus 20-24 mm longis lobis 19-23 mm longis subulatis, corollis hirsutis. Typus: Maui I., F. R. Warshauer 2,719.

*Cyrtandra biformalis* sp. nov. Novellae hirsutulae sunt, foliis oppositis inaequalibus, petiolis 10-55 mm longis hirsutulis, laminis 7-16 X 3-7 cm ellipticis subacuminatis supra hirsutulis infra pilosulis, cymis 4.5-7 cm longis 2-4-floriferis hirsutulis, pedicellis 17-22 mm longis, calycibus 13-15 mm longis hirsutulis, 2 lobis inferis dimidio infero 1-1.2 mm lato ligulato dimidio supero 2.7-3.5 mm lato elliptico, corollis 15-18 mm longis. Typus: Maui I., Nahiku, P. K. Higashino 9,184.

*Cyrtandra capillata* sp. nov. Novellae puberulae sunt, foliis oppositis inaequalibus, petiolis 9-32 mm longis puberulis, laminis 4-11.5 X 1.3-5 cm ellipticis acuminatis supra hirsutulis infra puberulis, cymis 5-6 cm longis 3-7-floriferis, calycibus 12-13 mm longis puberulis, 10bis 11-16 mm longis dimidio basali 1-3 mm latis ligulato dimidio apicali 3-4 mm lato elliptico, corollis 17 mm longis. Typus: Maui I., Kipahulu, P. K. Higashino 9,411.

*Cyrtandra depressa* sp. nov. Novellae pilosulae sunt, foliis oppositis, petiolis 3-5 cm longis pilosulis, laminis 10-19.5 X 3.3-5.4 cm fusiformibus infra pilosulis, cymis 3.5-4 cm longis 1-2-floriferis pilosulis, pedicellis 10-17 mm longis, calycibus 17-18 mm longis pilosulis, loba infera 8 mm longa lanceolata, corollis 26 mm longis, loba infera 9 mm longa suborbiculari. Typus: Hawaii I., Hamakua, F. R. Warshauer 1,281.

*Cyrtandra fruticosa* sp. nov. Novellae hirsutulae sunt, foliis oppositis, petiolis 10-60 mm longis hirsutulis, laminis 9-14.5 X 2.5-6 cm oblanceolatis acuminatis supra hirsutulis infra puberulis, cymis 5.5-10 cm longis 3-5-floriferis hirsutulis, pedicellis 18-38 mm longis, calycibus 15-20 mm longis pilosulis, lobis 12-17 mm longis eis superis ligulatis, corollis 24-26 mm longis pilosulis. Typus: Maui I., F. R. Warshauer 2,607.

*Cyrtandra haelaauensis* sp. nov. Novellae pilosae sunt, foliis oppositis, petiolis 13-50 mm longis hirsutis, laminis 5.5-12 X 2.5-4.3 cm ellipticis acuminatis supra hirsutis, infra nervis hirsutulis, cymis 4-5 cm longis 3-5-floriferis hirsutis, pedicellis 12-22 mm longis, calycibus 13-15 mm longis pilosulis lobis 13-14 mm longis subulatis ciliatis, corollis 18 mm longis. Typus: Maui I., Haelaau, H. St. John 10,213.

*Cyrtandra heliothine* Novellae hirsutulae sunt, foliis oppositis inaequalibus, petiolis 8-50 mm longis, laminis 4-12 X 2.3-5.2 cm ellipticis subacuminatis cuneatis hirsutulis, cymis 3.5-5.5 cm longis 1-floriferis hirsutulis, pedicellis 10-25 mm longis, calycibus 13-16 mm longis hirsutulis lobis 11-14 mm longis 1.5 mm latis ligulatis, corollis 25 mm longis loba infera 8 mm diametro suborbiculari. Typus: Maui I., Ke'anae, F. R. Warshauer 2,583.

*Cyrtandra hians* sp. nov. Novellae hirsutae sunt, foliis oppositis inaequalibus, petiolis 10-55 mm longis hirsutulis, laminis 8.5-16.5 X 3-8 cm ellipticis acuminatis supra hirsutulis infra pilosulis, cymis 3.5-9 cm longis 3-floriferis pilosulis, pedicellis 9-23 mm longis, calycibus 20-21 mm longis pilosulis lobis 17-18 mm longis dimidio basali 3 mm lato ligulato dimidio apicali 4.3 mm lato elliptico, corollis 24 mm longis villosulis. Typus: Maui I., Keanae Gap, F. R. Warshauer 2,833.

*Cyrtandra ligulata* sp. nov. Petiolae 4 cm longae pilosulae sunt, laminis 10.5-11 X 5.5-6 cm ellipticis acuminatis supra nervis hirsutis infra nervis pilosis, cymis 5.5-7 cm longis 3-floriferis pilosis, pedicellis 17-24 mm longis, calycibus 20-24 mm longis pilosis lobis superis 10-11 mm longis subulate ligulatis, baccis lanceo-ovoideis glabris. Typus: Hawaii I., Hamakua, F. R. Warshauer 1,639.

*Cyrtandra occidentalis* sp. nov. Novellae hirsutae sunt, foliis oppositis, petiolis 12-24 mm longis hirsutis, laminis 7-19.5 X 2-3.5 cm lanceolatis supra hirsutis infra pilosulis, cymis 3-4 cm longis (3-) 1-floriferis hirsutis, pedicellis 8-15 mm longis, calycibus 14-15 mm longis lobis 12.4-14.5 mm longis ligulatis, corollis 22 mm longis pilosulis. Typus: Maui I., P. K. Higashino 9,498.

*Cyrtandra oopuolaensis* sp. nov. Novellae pilosulae sunt, foliis oppositis, petiolis 3-7 cm longis pilosulis, laminis 8-16.5 X 3.9-7.2 cm ellipticis acuminatis basi cuneata et decurrentis supra pilosulis infra puberulis, cymis 4-5 cm longis 3-floriferis pilosulis, pedicellis 12-18 mm longis, calycibus 12-14 mm longis, lobis 11-13 mm longis apice spatulato 2.3-2.8 mm lato, Typus: Maui I., Oopuola Stream, H. St. John et al. 25,620.

*Cyrtandra orientalis* sp. nov. Novellae pilosae sunt, foliis oppositis, petiolis 16-30 mm longis pilosulis, laminis 13-18 X 4-6.7 cm coriaceis lanceolatis acuminatis hirsutulis, cymis 5 cm longis 7-floriferis pilosulis, pedicellis 7-10 mm longis, calycibus 17-18 mm longis pilosulis, lobis 14-15 mm longis ligulatis subspathulatis, corollis 25 mm longis pilosulis. Typus: Maui I., F. R. Warshauer 2,830.

*Cyrtandra petiolata* sp. nov. Novellae villosae sunt. foliis oppositis, petiolis 5-9 cm longis villosis, laminis 15-17  $\times$  7.2-8 cm ellipticis acuminatis basi elongate cuneatis supra villosis infra hirsutis, cymis 25-35 cm longis 5-13-floriferis villosis, pedicellis 4-10 mm longis, calycibus 9-10 mm longis villosis tubo 1.5-2 mm longo lobis inaequalibus apice spatulato, corollis 18 mm longis villosis. Typus: Maui I., Waikamoi, C. N. Forbes 1,285.M.

*Cyrtandra phaie* sp. nov. Novellae hirsutae sunt, foliis oppositis, petiolis 3-4.7 cm longis hirsutis, laminis 9-14  $\times$  3.5-4.3 cm ellipticis acuminatis supra hirsutis infra nervis hirsutis, cymis 4 cm longis 1-floriferis hirsutis, calycibus 18 mm longis hirsutis lobis 10-11.5 mm longis ligulatis, corollis 19 mm longis hirsutis. Typus: Hawaii I., Glenwood, O. Degener 30,307.

*Cyrtandra puberula* sp. nov. Novellae puberulae sunt, foliis oppositis inaequalibus, petiolis 14-35 mm longis puberulis, laminis 7-10.5  $\times$  2.4-4 cm ellipticis subacuminatis puberulis, cymis 3-5 cm longis 2-4-floriferis puberulis, pedicellis 9-14 mm longis, calycibus 10-12 mm longis puberulis lobis 9-10.5 mm longis ligulatis, corollis 23 mm longis puberulis. Typus: Maui I., Kipahulu, P. K. Higashino 9,402.

*Cyrtandra quinquefasciata* sp. nov. Novellae pilosulae sunt, foliis oppositis inaequalibus, petiolis 14-35 mm longis pilosulis, laminis 6-12  $\times$  2.2-3.7 cm oblanceolatis supra hirsutulis infra pilosulis, cymis 3.5-5 cm longis pilosulis, pedicellis 9-14 mm longis, calycibus 10-11 mm longis pilosulis lobis 9-10 mm longis parte  $\frac{3}{4}$  basali 0.7-1.2 mm lata ligulata parte  $\frac{1}{2}$  apicali 1.5 mm lata elliptica, corollis 14-17 mm longis pilosulis. Typus: Maui I., Kipahulu, P. K. Higashino 9,402.

*Cyrtandra terna* sp. nov. Novellae pilosulae sunt, foliis oppositis, petiolis 1-4 cm longis pilosulis, laminis 6.5-14  $\times$  2.7-4.2 cm oblanceolatis ellipticisve acuminatis basi cuneata decurrenti supra hirsutulis infra nervis pilosulis, cymis 4-5.5 cm longis 3-floriferis puberulis, pedicellis 9-14 mm longis, calycibus 15-18 mm longis lobis 12-16 mm longis ligulatis subobtusis, corollis 22-24 mm longis. Typus: Maui I., Kipahulu, F. R. Warshauer 2,854,

*Cyrtandra terniflora* sp. nov. Novellae hirsutulae sunt, foliis oppositis inaequalibus, petiolis 1-4 cm longis hirsutulis, laminis 5-11.8  $\times$  3-6.2 cm ellipticis acuminatis supra hirsutulis infra pilosulis, cymis 5-6 cm longis 3-floriferis hirsutulis, pedicellis 14-16 mm longis, calycibus 16-17 mm longis hirsutulis lobis 14-15 mm longis in apice spathulatis, corollis 22 mm longis. Typus: Maui I., P. K. Higashino 9,102.